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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/404,826	09/24/1999	MICHAEL J. HAWTHORNE	509/35644	8826

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BARNES & THORNBURG
750-17TH STREET NW
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WASHINGTON, DC 20006

EXAMINER

KISS, ERIC B

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 05/06/2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Dr

Office Action Summary

Application No.

09/404,826

Applicant(s)

HAWTHORNE ET AL.

Examiner

Eric B. Kiss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9, 10, 12-21 and 46-49 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 15-21 and 46-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 12, 2003, has been entered.
2. Claims 1-7, 9, 10, 12-21 and 46-49 are pending.
3. Claims 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim (see Response to Arguments and the 35 USC § 102 rejection of claim 1 below).

Response to Arguments

4. Applicant's arguments filed on March 12, 2003, have been fully considered but they are not persuasive.
5. On page 2, paragraph 2, Applicant argues:

As a first point of distinction, there is no description the intelligent devices [of Neeson et al.] can be event recorders, train performance data or track data in files. ... Even if the intelligent devices are interpreted to include such types of devices, the information in these files are not being collected from the intelligent devices

for transmission, but only whether [the] event recorder train data monitoring devices and track monitoring devices are present or not present or active. In Neeson et al., train speed and control information is transferred from the train to processor 46, but there is no description nor is it obvious in view of the disclosure of Neeson et al. to collect such data in a file and then transfer any new files since the last transmission.

However, as discussed in the previous office action, the method of Neeson et al. builds on, and incorporates the elements of, the AMCI Base Networking System (ABNS), which includes collecting and transmitting event recorder data, train performance data, and track data (train control, location, and speed monitoring, track warrants and bulletins and work order reporting; see column 1, line 51 through column 2, line 4). Neeson et al. further describes the ABNS as including the intelligent devices and providing communications between the intelligent devices and a central computer location via mobile communications packages to transmit the information, such as work order reporting and location monitoring (see column 2, lines 5-27). The invention of Neeson et al. is described as being designed to “piggy back” on the already existing ABNS and ATCS (Advanced Train Control System) systems (see column 22, lines 55-59).

Further, Neeson et al. disclose collecting data in files and transferring any new files since the last transmission (see column 5, lines 1-15, in which differences are detected in an updated Health Report for the purpose of sending changes in equipment onboard the locomotive).

6. On page 2, paragraph 3, Applicant argues:

As a second point of distinction, there is no determination onboard of a remote station within range. The description in Neeson et al. is that the remote stations are in control of the communications with the locomotive. As indicated in column 7, the paragraph beginning on line 29, the base stations 52 and 54

maintain contact with the locomotive and the communication is "passed off" to the next station along the path. The determination and initiation of communication is not from onboard the train.

However, as discussed in the previous office action, "passing off" communication to the next station along the path (as disclosed by Neeson et al.) is a function of determining if a remote station is in range. Neeson et al. discloses the field unit (locomotive) remaining in radio contact range of the nearest base station as it moves along the track. "Passing off" infers that as a new base station comes within range, radio communication is handled by the new base station that is determined to be within range.

Further, Neeson et al. disclose an onboard determination of whether a remote station is within range (see column 5, lines 16-32, wherein it is described how the locomotive does not attempt to send data when it is determined to be out of communication with the ground network).

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-3, 5-7, 9, 10, and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,786,998 to Neeson et al.

As per claim 1, Neeson discloses collecting event recorder data, train performance data and track data from onboard in files on the on-board computer (see column 1, line 51 through column 2, line 4; and column 8, lines 11-24); determining onboard if a remote station is within

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communication range (see column 5, lines 16-32; and column 7, line 63 through column 8, line 3); establishing onboard wireless communication between an on-board computer (field unit) and a remote station (base station; see column 7, lines 29-47); and determining onboard which of the files are new since last transmission, and transferring the new files to the remote station (see column 5, lines 1-15).

As per claims 2 and 3, Neeson discloses determining whether a remote station has updates to be transferred and transferring the updates, including software updates (configuration changes) to the on-board computer (see column 19, lines 49-67).

As per claim 5, Neeson further discloses determining the location of the train and the location of the next remote station (receiving base station; see column 7, line 63 through column 8, line 3).

As per claim 6, Neeson further discloses transmitting a wireless query and monitoring for a response (loss of mobile contact/acquired mobiles; see column 21, lines 42-48).

As per claim 7, Neeson further discloses resuming file transfers during subsequent communication sessions after an interruption of wireless communication (see column 14, line 10 through column 15, line 34).

As per claim 9, Neeson further discloses files including data from plural event recorders (intelligent devices) that transfer data to the on-board computer (processing device; see column 4, lines 44-57).

As per claim 10, Neeson further discloses the plural event recorders each connected to a respective on-board computer (intelligent devices have computer processing – “receive and understand” capabilities; see column 2, lines 5-27), establishing wireless communication

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between the on-board computers (intelligent devices) and the remote station (intelligent devices communicate to the base stations via the processing device), and transferring event recorder data from each of the on-board computers to the remote station (see column 4, line 33 through column 5, line 15).

As per claim 15, Neeson further discloses establishing communication between a remote station (base station) and a home base station (front end processor), and determining what files need to be transferred and transferring the files (see column 8, lines 11-18 and lines 40-44).

As per claim 16, Neeson further discloses transferring operational data for the onboard computer (traffic control information; see column 8, lines 18-24) from the home base station (front end processor) to the remote station (base station).

As per claims 17 and 18, Neeson further discloses transferring operation information of the remote station, including locomotives contacted (locomotive ID) from the remote station (base station) to the home base station (front end processor; see column 12, lines 50-67).

As per claim 19, Neeson further discloses establishing communication between the remote station (base station) and the home base station (front end processor) when requested by a user or according to a schedule (see column 10, lines 19-24).

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claims 1 and 22 above, and further in view of U.S. Patent No. 5,848,064 to Cowan.

As per claim 4, Neeson teaches transferring updates to the on-board computer (see column 19, lines 49-67) but fails to teach comparing the version of a file in the on-board computer to the version of a file in the remote station to affect what is transferred. However, Cowan teaches changing the operating software of mobile terminals by detecting a change in a software version identifier in a remote station (host computer) and transferring the change (new version) resulting from the comparison (see column 6, lines 41-51). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the software updating method of Neeson to include the version comparison of Cowan. One would be motivated to do so to ensure that on-board computer's software is kept up-to-date.

11. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claim 1 above, and further in view of U.S. Patent No. 5,420,883 to Swensen et al.

As per claims 20 and 21, Neeson teaches transferring files between an on-board computer and a remote station (base station; see column 8, lines 11-24) but fails to teach transferring files between remote stations. However, Swensen teaches a hierarchical scheme in which remote stations (trackside radios) retransmit received messages to other, different level, remote stations within a subnet (see column 5, line 64 through column 6, line 29 and Figure 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Neeson method to include the retransmitting scheme of Swensen. One

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would be motivated to do so to allow for contacting a train or remote station where a direct link is not possible.

12. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claim 1 above, and further in view of U.S. Patent No. 5,785,283 to Ehrenberger et al.

As per claims 46 and 47, Neeson teaches transferring data from a remote station to an on-board computer and from an on-board computer to a remote station (base station; see column 8, lines 11-24) but fails to teach transferring track data or displaying track data on the train. However, Ehrenberger teaches transferring track data (wayside defects) from a remote station (wayside system) to an on-board computer (see Figure 1) and displaying the track data on the train (see column 3, lines 9 through 21). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Neeson method to include transferring track data to the on-board computer and displaying the track data as taught by Ehrenberger and subsequently transferring the track data to another remote station. One would be motivated to do so to keep the train operator informed of potential hazards in the area and to disseminate the information to other train operators in the system.

As per claim 48, in addition to the teachings applied above, Ehrenberger further suggests other types of track data, including status of a highway crossing analyzer (see column 6, lines 52-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the Neeson method to include track information such as crossing gate position or crossing occupancy status as per the suggestion of Ehrenberger. One

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would be motivated to do so to communicate a potential highway crossing hazard to the locomotive operator in advance of the train approaching the highway crossing.

As per claim 49, in addition to the teachings applied above, it would have been furthermore obvious to include correlating train performance data with track data, e.g. making a change in speed in response to a detected potential hazard.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Microsoft Press Computer User's Dictionary, page 142, is cited for its definition of the term "file".

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Kiss whose telephone number is (703) 305-7737. The examiner can normally be reached on Tue. - Fri., 7:30 am - 5:00 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703) 308-4789.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

(703) 746-7239 (for formal communications intended for entry)

Or:

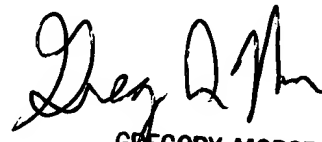
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(703) 746-7240 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington, VA, 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the receptionist whose telephone number is (703) 305-3900.

EBK/*EBk*
April 24, 2003


GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100